

CheXpress® CX30

Small Business Remote Deposit Check Scanner



User Manual

September 2009
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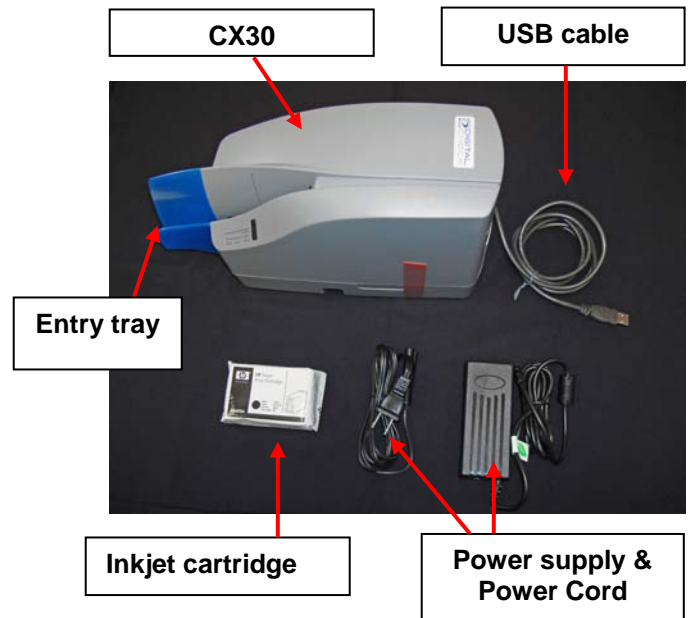
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CheXpress® CX30 Equipment

CheXpress® CX30 Equipment Checklist

The CheXpress® CX30 package includes the following pieces:

- CheXpress® CX30 scanner unit
- USB 2.0 cable
- 100v-240v -50/60 hz Voltage Sensing, external power supply
- HP inkjet cartridge (Optional feature)



CheXpress® CX30 System Requirements

The following PC specifications are required to operate the CheXpress® CX30 with your scanning application software:

Recommended	Minimum
<ul style="list-style-type: none">▪ 2.4 GHz Pentium IV processor2 GB RAM	<ul style="list-style-type: none">• 1GHz Pentium III processor1 G RAM
<ul style="list-style-type: none">▪ 5 GB free disk space	<ul style="list-style-type: none">• 1.5 GB free disk space
<ul style="list-style-type: none">▪ XP Professional, Vista or Windows 7 (32 or 64 bit)	<ul style="list-style-type: none">• XP Professional, Vista or Windows 7 (32 or 64 bit)
<ul style="list-style-type: none">▪ USB 2.0 port	<ul style="list-style-type: none">• USB 2.0 port

Radio Frequency Interference

The CheXpress® CX30 generates, uses, and can radiate radio frequency energy. If the unit is not installed and used properly, that is, in strict accordance with the instructions in this manual it may cause harmful interference to radio communications. It has been tested and found to comply with the limits for Class B digital devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against harmful interference when operated in a commercial environment.

Operation of this equipment in a residential area is not likely to cause interference due to its Class B rating.

About the CheXpress® CX30

The CheXpress® CX30 Small Business & Remote Deposit Scanners is an easy-to-use, compact, scanner that connects to a personal computer (PC). The CheXpress® CX30 automatically scans the front and/or back of checks and also reads the MICR (Magnetic Ink Character Recognition) code line. The images and data are then transmitted through a Universal Serial Bus (USB) interface to the PC. The CX30 model has a single item manual 'drop & slide' feeder that offers several modes of operation. The default mode is a Scan & Return operation. Other options are Pass Thru and Scan, Park & Return. These are controlled through the application and by the exit door position.

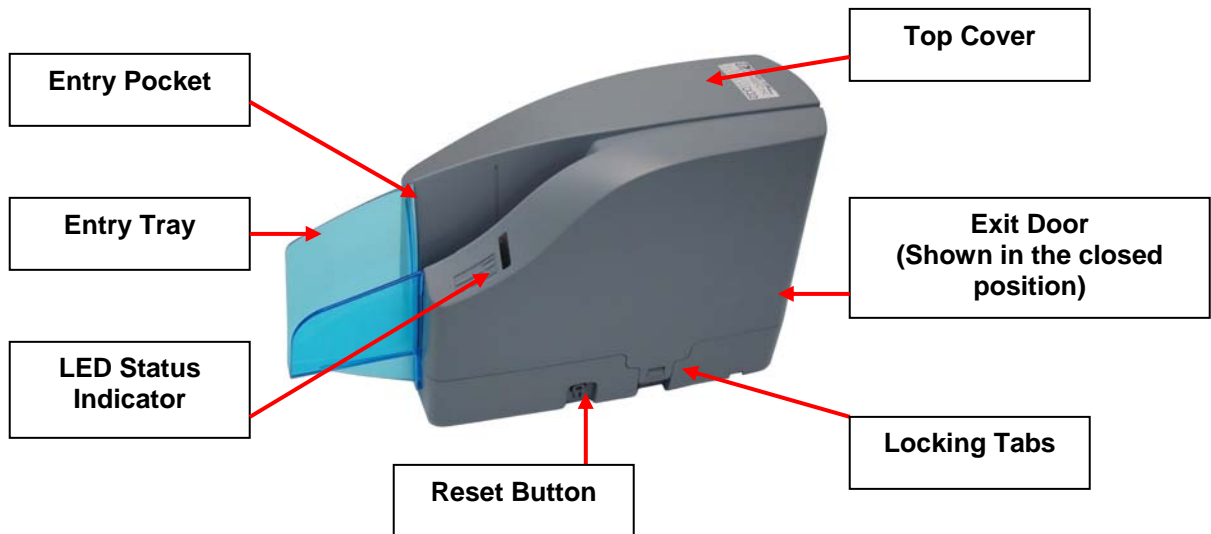
The CX30 model is rated at up to 30 documents per minute (DPM) scanning speed. Speeds and will vary based on the applications used, the PC processing speeds and mode of operation.

The CX30 uses mini-connectors in a recessed area in the bottom cover along with multiple cable channels to minimize desk foot print and increase placement options. The scanner does not use an On / Off switch, but does have a momentary 'Reset Button' that can be pressed to reload the scanner application. The CX30 is powered off when the PC powers down as it senses the loss of power to the USB port.

Features of the CheXpress® CX30

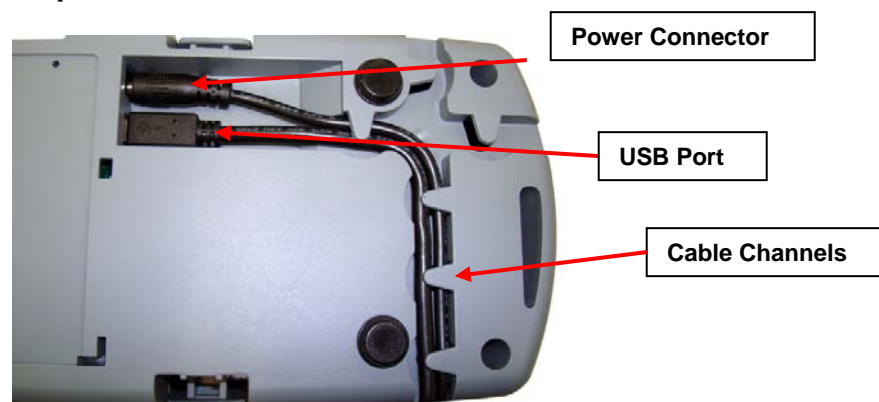
Outside the CheXpress® CX30

Fig. 1



Bottom View of the CheXpress® CX30

Fig. 2



CheXpress® CX30 Installation

Un-Boxing the CheXpress® CX30

Step 1: Lay the box on it's side and slide out the packaing and scanner. Lift off the top plastic insert (USB cable is inside), then lift the scanner from the bottom insert.

Fig. 3



WARNING: Before powering on the scanner, you will want to install the USB driver. See 'Installing the Driver Files' section on page 8 for instructions.

Setting Up The Scanner

1. Install USB driver onto operating PC before connecting device (see section on Installing USB Driver)
2. Place the unit on a flat surface near the PC and away from direct light.
3. Connect the power cord for the external power supply to the power supply and then plug in the connector into the bottom access, but do not connect to the power source until the driver has been loaded.
4. Connect the USB cable by plugging it into the bottom access port.
5. Note: Route the two cords through any of the three cable channels to provide the best routing for you environment.
6. Make sure the CheXpress® CX30 is unplugged from power outlet. Verify that the red power indicator on the Control Panel is **not** lit. Keep the power supply unplugged from the power source until the USB driver has been loaded onto PC.

Installing the Rear Endorser Inkjet Cartridge

Follow these instructions when installing the inkjet cartridge for the first time, or when replacing an empty cartridge:

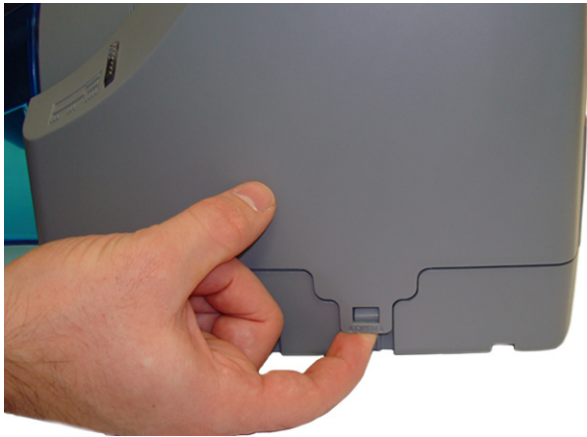


Fig. 4

Gently pull out on the tabs on the top scanner cover. Lift up on the cover for access to the inkjet platform.

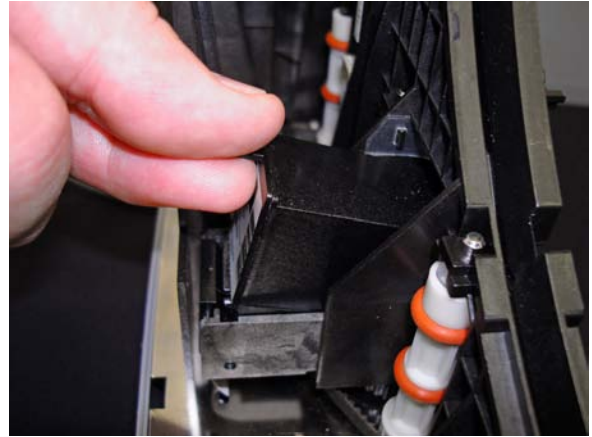


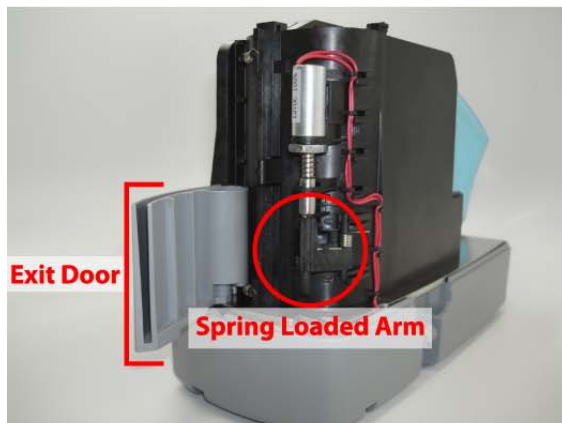
Fig. 5

1. If replacing an existing cartridge, remove the inkjet cartridge by grasping the small tab at the rear end and gently pulling upward. Discard the used cartridge.
2. Obtain a new inkjet cartridge (HP part number C6602A). For new installations, one new cartridge is included with each inkjet model scanner. Be certain to read the instructions included with the cartridge.
3. Remove the protective tape covering the ink nozzles. Be careful not to touch the ink nozzle with your fingers or allow it to come in contact with any clothing.
4. Insert the nozzle end of the cartridge into the cradle (Fig. 5) in the scanner and slide forward while keeping the reservoir end of the cartridge tilted slightly upward.
5. Push the cartridge downward until it snaps into position. The cartridge should be level to the baseplate when fully seated. Replace the top-center scanner cover.

Note: If the scanner has to be transported by common carrier from one place to another or extended periods of inactivity, it's advisable to remove the inkjet cartridge from the scanner and seal in an airtight bag. If the cartridge has not been used for an extended period of time, it may be necessary to clean the inkjet nozzles with a wet towel, and then blot dry.

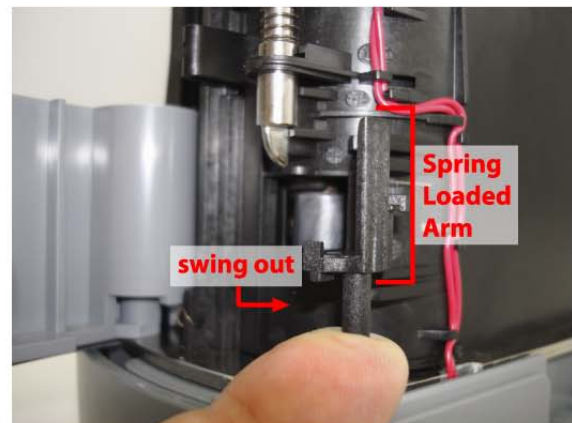
Installing the Franker Roller (Optional)

Step 1: Remove the Main Scanner Cover. Open the Exit Door located at the rear of the scanner. Locate the Spring Loaded Arm.



Step 2: Swing out and hold the Spring Loaded Arm open (as shown). The Franker Roller will slide onto a Post that is part of the Spring Loaded Arm.

CAUTION: Do not overextend the Spring Loaded Arm as this can permanently bend or damage the Spring.

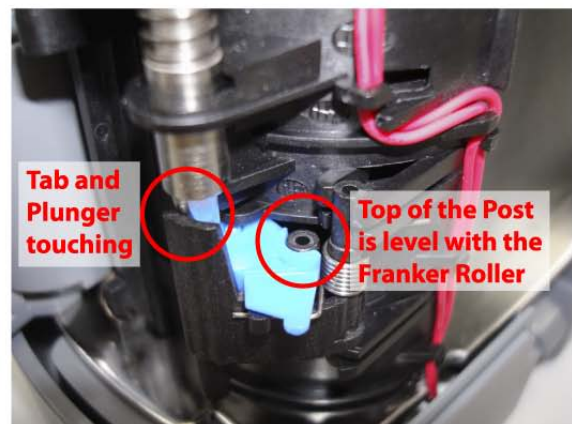


Step 3: Holding the Franker Roller (as shown), slide the Roller onto the Post.



Step 4: Confirm that the Franker Roller is fully seated onto the Post. The top of the Post should be level with the Franker Roller (as shown).

The Tab on the Spring Loaded Arm should be touching the metal Plunger (as shown). Close the Exit Door and replace the Main Scanner Cover.



Installing the USB driver

NOTE: Confirm that the TellerScan USB Device drivers have been installed before connecting the USB cable to the PC. If you have not installed or received the device drivers, contact your check scanning solution provider.

Optional driver installation directions/using the DCC demo programs:

- 1) Download the **TellerScan USB Driver** file from the web site.
http://www.digitalcheck.com/integration_support/drivers_and_demo_programs
- 2) Unzip the file and run the driver utility program to automatically install the firmware and create a folder for the driver files (C:\Program Files\TellerScan\Drivers).
- 3) Connect the power supply and the USB Cable. The LED on the scanner control panel should now be showing 'red'.
- 4) Windows detects a new hardware device.
- 5) The LED will turn 'green' when the application launches and acquires the scanner.

NOTE: While the scanner will run on a USB 1.1 port, it is recommended that a USB 2.0 port be used to provide better overall performance. An INI file parameter will need to be increased to allow running on a USB 1.1 port due to the slower throughput. Check with your application provider.

Install the Demo Software Program (*Download from the Digital Check website. Use the ScanLite program for testing the scanner and during the cleaning process*)

To download ScanLite Go to:

http://www.digitalcheck.com/integration_support/drivers_and_demo_programs

The demo software is a basic scan program that allows you to operate the scanner, change different scanner settings, view images, and store them on your PC's hard disk. The demo program is not the software to run the system. Additional application software is required. ScanLite is an easier demo program to use and is recommended that it be used when cleaning the scanner.

1. Create a sub directory on the PC and label it "ScanLite."
2. Copy the ScanLite files into the directory.
3. Launch the ScanLite.exe to open the demo application.

Getting Started with CheXpress® CX30

LED status indicator

Fig. 6



The status LED with no light on. This is the normal state when waiting to be connected to the PC and to a power connection.

Fig. 7



The status LED with the 'Red' light on. This is the normal state when waiting to be acquired and indicates a good USB and power connection.

The standard sequence for the status LED is:

1. When the scanner is powered on and the USB cable is connected, the LED will light up 'Red'. This indicates initial power and a PC connection to the scanner.
2. Note: Both ends of the USB cable must be plugged in for the LED light to turn 'Red'. If the LED does not turn 'Red', check and reseal the end of the USB cable going into the PC and into the scanner and that the PC is turned on. Then check to make sure your power source is live.
3. If the firmware and drivers have been properly loaded, once the application launches and acquires the scanner, the right LED will now turn 'Green'.

4. After the CheXpress® CX30 is synchronized with the application; the LED is used to detect the presence of documents in the entry pocket and will turn 'Orange' once a document is loaded.
5. After a document scan using the Scan & Return mode, the check will stop in the entry pocket and show a flashing 'Orange' light. This indicates the document has been scanned and it can be removed.
6. A flashing 'Red' LED indicates an error. Select an eject option within the application, if available, or look for a document in the path and press and release the 'reset button' on the side of the scanner.

How to Load Checks

CX30 – The manual 'drop & slide' feeder takes just one check at a time. Use the following directions:

1. Remove all rubber bands, staples, paper clips, pins, etc.
2. Hold the item with the front of the item facing out and away from the scanner (see Fig 8).

NOTE: Checks must be inserted flat into the entry tray and slide forward until it stops or is pulled into the scanner.

3. The status LED should momentarily turn 'Orange' and the motor should start and take the check into the path.
4. Depending upon the scan mode selected by the application and the open or closed position of the exit door, the document will either scan through the unit and stop in the exit door or scan and return back to the entry tray for easy removal.

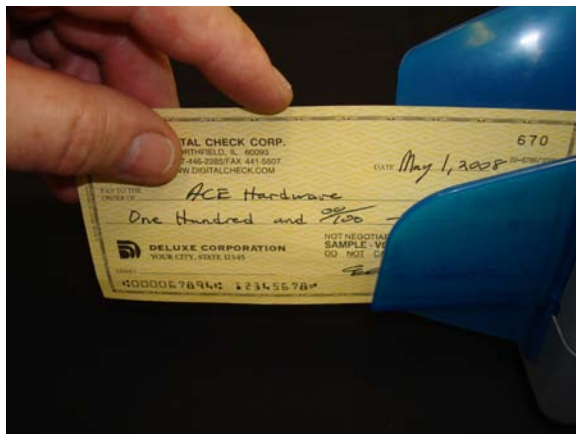


Fig. 8



Opening the CX30

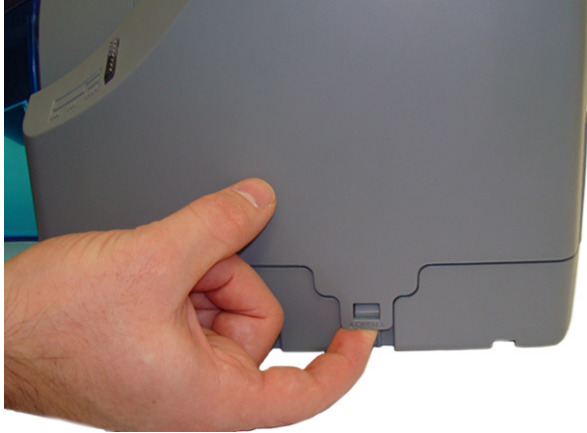


Fig. 9

Gently pull out the tabs on the top scanner cover. Lift up on the cover to open.

Opening the Camera Door

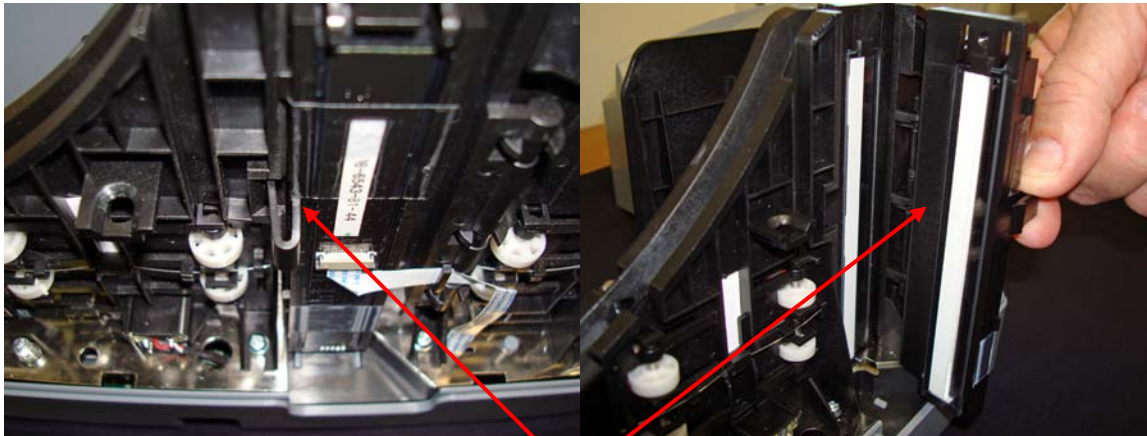


Fig.10

Outer camera door. Pinch latch to pivot door open.

The internal path offers a straight through or 'U' path and has several doors to provide easy access for removing stuck or damaged documents. The cameras can be easily cleaned by opening the outer camera door. The cameras are recessed to minimize getting any dirt or debris on them, but the CX30 has been designed to make it easy to access both cameras.

Opening the Internal Path



Fig. 11 - Internal path – access door. Open exit door, then open the access door.



Fig. 12 Replace the center cover by setting it back on the unit vertically.

Disconnecting the USB and / or Power Cables



Fig. 13 The correct way to remove a cable.



Fig. 14 INCORRECT removal.

When removing or disconnecting the USB or Power Supply Cable from the CheXpress CX30, be sure to pull straight back on the cable and remove as shown in Fig. 13.

DO NOT remove the cable by pulling up, vertically or at an angle (See Fig. 14). Doing so can damage the connector. The cables must be removed by gently pulling straight back on the cable from the connector.

CheXpress® CX30 Troubleshooting

Clearing Jams

If a jam occurs, the paper path must be cleared. To do this, try to advance the jammed document by selecting the “EJECT” button within your application (if applicable). In case the document does not exit the document track, you can follow these steps:

1. Remove the top-center cover to access the track.
2. Clear the path of any jammed document and make sure that the rollers are free of paper and debris. The front camera and internal path have access doors for easy removal.
3. Replace the top-center cover.

Document Feeding Problems

The CheXpress® CX30 was designed to be a manual ‘drop & slide’ feeder. If you notice feeding problems, check the documents for bent or folded edges and for debris in the scanner document track. If feeding problems are still experienced, try cleaning the scanner using a CheXpress® cleaning card and the procedures described within this users guide.

Check Images are streaking or fading

If you notice either streaking or fading on the images, the scanheads may require cleaning. Refer to the section below on cleaning the scanheads.

CheXpress® CX30 Operator Maintenance

Cleaning the CheXpress® CX30

Over time, ink, dirt and dust particles will collect on the scanner rollers and document track. Therefore, it is necessary to clean these areas on a regular basis to assure reliable performance. Tips for performing preventative maintenance by the user on the CheXpress® CX30 include:

- A Periodic inspection of the document track area can be done. You can open the outer scanhead door to look at each scanhead. (fig. 10)
- Have a can of compressed air available to blow out the document track on a regular basis. The area below the outer scanhead is a dust collection bin. Be sure to blow out this area when doing periodic cleaning.
- Purchase the CheXpress® cleaning cards to have on hand for regular cleaning maintenance. Run several scan cycles, flipping the card between cycles. Allow the card to scan through the entire path with the exit door open. Run this through several times while flipping the card end to end and top to bottom.
- Inspect the quality of the captured images on a regular basis. If the image quality drops off, inspect and clean the scanheads following the procedure to open the out scanhead door and wipe down the camera surfaces. If this does not correct the problem, contact your service provider.

Cleaning the Scanner

Cleaning your scanner's Rollers, Magnetic Head and Camera Faceplates

In severe environments where ink and dirt build up rapidly, it may be necessary to clean the scanner rollers and magnetic read head, and document track every six to twelve months. This simple maintenance will dramatically improve the reliability of your scanner over its useful life.

Scanner Cleaning Supplies (to order visit www.digitalcheck.com or call 847.446.2285)

1. Compressed Air – (acquired from a local office supply provider)
2. Cleaning Cards – Consisting of one box of 25 cleaning cards – (#IS0028)
3. Cleaning Kit – Consisting of box of 25 cleaning cards & 6 cleaning swabs – (#130007-03)

Cleaning The CheXpress® CX30 using ScanLite Software

The ScanLite program, which is available from the Digital Check web site, is an excellent utility to run while performing the cleaning procedures recommended below. ScanLite provides an easy way to initiate the scan cycles in order to feed the cleaning cards properly through the scanner. ScanLite also includes an 'Eject' button which operates the scanner at half its normal speed, making it easy to run the cleaning cards while they are still wet.

Visit the following site to download ScanLite:

http://www.digitalcheck.com/integration_support/drivers_and_demo_programs

Helpful Hints

1. Do not use stickers to cover up previously sprayed numbers on documents. The backing from the stickers can rub off onto the rollers and cause documents to jam.
2. Do not use "White Out" on scanned documents, the "White Out" can rub off the documents onto the scanner path and walls.
3. Watch for loose debris getting into the scanner such as staples and rubber bands.
4. There are no user available adjustments within the CX30.
5. Periodic and scheduled cleaning should be performed before determining if any further problem determination is needed.

Cleaning Steps

1. You should remove the center cover to blow out the path. Lift up on the top-center cover.
2. Blow out the entire path, including the dust collection bin under the front scanhead.

Insert a new CheXpress® cleaning card in the entry pocket.



3. Open the imaging application or ScanLite and initiate feeding. You may need to nudge the card to get it to grab

Opening & Cleaning Scan-Head Steps

Note: This is only performed when document images are unclear, distorted or have a dark line laterally through every image.

1. Remove the top-center cover
2. See (figure 10) for opening the Scanhead outer door.
3. The glass area can be wiped with an alcohol swab, or damp cloth to remove any residue on the camera area.
4. Do not use any sharp, metal objects or you could scratch the glass.
5. Close the scanner door and replace the top-center cover.

Common Error Codes From The Scanner

-216	<p><u>Mis-Feed</u> (The document failed to enter the path on time).</p> <ul style="list-style-type: none"> • Remove the document and re-insert it. • Check for bent or excessively curled leading edges and straighten as needed. • If you continue to get -216 errors, this might indicate that; <ul style="list-style-type: none"> ○ The entry drive rollers may be dirty ○ Something may be lodged in the path
-220	<p><u>Document Stopped in the path or did not exit on time</u></p> <ul style="list-style-type: none"> • Eject the documents. To clear the error condition. • If the document will not eject, remove the top center cover and open the access doors to remove the document. • Check the leading edges and corners of the document and straighten as needed. • A -220 error code where the document is stopping in the path repeatedly could indicate debris, paper or a staple in the path. Check if the document's leading edge looks OK or is catching on something. • All of the main rollers may need to be cleaned.
-212	<p><u>No Checks</u> (There are no checks indicated in the entry pocket)</p> <ul style="list-style-type: none"> • A scan cycle has been initiated, but the status LED is not indicating that a document is present. • Reinsert the document and insert them back into the entry pocket. Slide them forward until the LED comes on. • This typically can happen when a scan cycle is initiated and the LED is not on.
-553	<p><u>No Print Head</u> (The ink jet cartridge is not being sensed by the scanner)</p> <ul style="list-style-type: none"> • When endorsing characters using the ink jet option, the print string is the first function sent down to the scanner at the start of a scan cycle. This error will come up immediately if no cartridge is present. • Open the top-center cover by lifting vertically. Remove and reseal the ink jet cartridge, being sure it snaps into place. • If that fails, try using a new cartridge.

-125	<p><u>No Scanner</u> (The scanner was not found while attempting to initialize the scanner)</p> <ul style="list-style-type: none"> • The status LED must be 'Red' for the application to acquire the unit. • Check the USB cable connections or try a different cable. • Try a different USB port. • Verify that the PC has the proper drivers and the scanner firmware file is installed. • Look in Device Manager for TS Device
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There are other helpful documents available in PDF format on the Digital Check web site.
Go to <http://www.digitalcheck.com>

Periodic and scheduled cleanings should be performed before determining if any further problem determination is needed. See the scanner cleaning section.

The ink jet cartridge used in the CX30 is the standard HP C6602A cartridge which is available at most office supply stores. Typical yield is from 5 to 7 million characters.

The CX30 scanner performance will depend on how the application has been written and the general speed of the PC processor, memory and hard drive.

For support, contact your dealer or Digital Check at 847-446-2285. The Service request form to send scanners into the plant for repair can be filled out on-line by going to the web site at: www.digitalcheck.com/clientarea and following instructions on the screen.

Frequently Asked Questions

How many checks per minute should my CX30 scan?

The CX30 is a manual feed scanner and its performance is dependent upon the operator. The CX30 has a rated speed of approximately 30 documents per minute (DPM) in scan and return mode. Actual throughput will vary depending on the PC configuration, physical size of the items scanned, mode of operation, Pass Thru, Scan & Return, or Scan- Park & Return and ultimately the operators proficiency. For a typical operator, the expected speed range is 10- 20 DPM.

‘Why Am I Getting Skewed or Short Images’?

If you notice that the images are skewing or coming up short, pay attention to inserting the documents flat into the entry tray and sliding them into the path. Documents inserted with a tilt or skew can be pulled into the scanner tilted and can cause image quality issues.

What is the proper sequence of the LED lights when the scanner is powered on?

The proper LED sequence is for the LED to come on ‘red’ when it is attached to power and to the PC. This is followed by the LED turning ‘green’ once the application has been launched. If the LED does not come on ‘red’, check the USB cable connection and the power. If the LED is ‘red’, but will not turn ‘green’, contact customer support for assistance with checking firmware and reloading the drivers.

What is a safe distance to keep the power supply from the CX30 check scanner to prevent electromagnetic interference with the MICR read head in the scanner?

Keep power supplies and other electromagnetic devices 10-12 inches away from the scanner to keep them from interfering with the Magnetic read head.

How often should the CX30 check scanner be cleaned?

The recommended cleaning cycle is only as needed. A typical cycle may be once every six to twelve months. Please reference the cleaning instructions section for specific instructions on how to properly clean the CX30.

How many characters does the HP C6602A inkjet cartridge yield?

Once opened, the practical life of the inkjet cartridge is six months. However, the rated character yield on the inkjet cartridge is between 5-7 million characters. Do not shake or drop to cartridge which can cause the printing to fail. Keep a spare cartridge on hand in case the current cartridge cannot be used.

What are the minimum and maximum document dimensions for the CX30?

	Minimum	Maximum
Document Height:	2.12"(54 mm)	4.13" (105mm)
Document Length:	3.19" (81mm)	8.98" (228mm)
Document Weight:		
Scan & Return Mode	16 lb (60gr/sqm)	28 lb (105gr/sqm)
Pass Through Mode	16 lb (60gr/sqm)	54 lb (203gr/sqm)

CheXpress® CX30 Specifications

Paper Size	H. min. 2.12" – max. 4.13" (54-105 mm.) L. min. 3.19" – max 8.98" (81-228 mm.)
Scanning Method	Concurrent two-sided Duplex Image Creation: 2 x 1296 cell, 106mm CIS Light Source: Tricolor LED
Transport Speed	50 cm/sec Typical scan speed of 1 second (6" document)
Image resolution	100, 120, 200, 240, 300 dpi
Image Format	B/W, 16 or 256 gray levels, 24 bit RGB color
MICR Recognition	MICR recognition firmware for E13B or CMC7 standards
Diagnostics	Single LED Status Indicator
Power-On Self Test	Automatic self-testing when switching on the unit
Software Tools	API Toolkit 32 bit Supported under: Windows 2000, XP, Vista and 7 - 32 & 64 bit.
Options	Ink jet printer (Rear endorse), Uses HP C6602A cartridge
Part #IS0028 Part #130007-03	CheXpress® Cleaning Cards (25 Cards) Cleaning Kit (25 cards + 6 Swabs)
Electrical	Consumption: 45 watts, peak Voltage: 100 to 240 VAC, 50/60 Hz, auto sensing power supply Meets CEC IV
Product life	Designed for useful life of 1,000,000 items (CX30) Usage Factor – 5 - 500 items per day
MTTR:	15 minutes
Temperature Ratings:	Operating: 60° - 90° F Storage: 0° - 40° C
Humidity:	Operating: 35-85% (non condensing)
Dimensions	H 7.47 »(8.97 cm) – L 9.38 « (23.83 cm) – D 3.92 « (9.96 cm)
Weight	3.95 lbs. (1.8 kg)
Certifications	UL – FCC Class B – CE - cUL

Specifications subject to change

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